

USSN 09/726,470

Attorney Docket No. CCI-014

**DRAFT – Claim Amendments**

Claims 1-15, and 26-54 have been withdrawn from consideration.

Claims 16, 20-22 and 25 are amended.

New claims 55-62 are added.

16. (Currently Amended) A peptide consisting of the formula II;



wherein  $X_1$ ,  $X_3$ ,  $X_4$  and  $X_5$  ~~may be any~~ are each a natural or unnatural amino acid and  $X_2$  is serine or alanine; ~~and variants thereof.~~

17. (Original) A peptide according to claim 16, wherein  $X_5$  is selected from isoleucine and glycine.

18. (Original) A peptide according to claim 16, wherein  $X_1$  and  $X_4$  are both basic amino acid residues and  $X_3$  is a basic or polar residue.

19. (Original) A peptide according to claim 18, wherein  $X_1$  is histidine and  $X_4$  is arginine, and  $X_3$  is lysine or cysteine.

20. (Currently Amended) A peptide consisting of the formula;



wherein  $X_1$ ,  $X_3$ ,  $X_4$  and  $X_5$  ~~may be any~~ are each a natural or unnatural amino acid and  $X_2$  is serine or alanine; ~~and variants thereof,~~ wherein the peptide is ~~modified by at least one~~ of;

(a) modified by deletion, addition or substitution of one or more amino acid residues; ~~or by;~~

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(b) modified by substitution of one or more natural amino acid residues by the corresponding D-stereomer; or by a non-natural amino acid residue; (d) chemical derivatives of the peptides;

(e) a cyclic peptides derived from the peptides or from the peptide derivatives; dual peptides, multimers of the peptides and any of said peptides in the D stereomer form;

or

(h) modified by reversing the order of the final two residues at the C-terminal end are reversed;

(i) any combination of (a)-(h).

21. (Currently amended) A peptide consisting of the formula;



(SEQ ID No. 2)

wherein ~~X<sub>1</sub>, X<sub>2</sub>, X<sub>4</sub> and X<sub>5</sub> may be amino acid and X<sub>2</sub> is serine or alanine; and variants thereof, wherein:~~

- (a) X<sub>1</sub> is deleted or is ~~any~~ a natural or unnatural amino acid,
- (b) X<sub>2</sub> is serine or alanine or a straight or branched chain amino acid,
- (c) X<sub>3</sub> is a basic amino acid or straight chain aliphatic amino acid,
- (d) R is unchanged or conservatively substituted (by a basic amino acids),
- (e) X<sub>4</sub> is ~~any an~~ amino acid that is capable of providing at least one site for participating in hydrogen bonding,
- (f) L is unchanged or conservatively substituted,
- (g) X<sub>5</sub> is ~~any a~~ a natural or unnatural amino acid, or
- (h) F is unchanged or substituted by ~~any an~~ an aromatic amino acid.

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22. (Currently Amended) A peptide consisting of the formula;



(SEQ ID No. 2),

wherein

(a)  $X_1$  is histidine, deleted, or replaced by a natural or unnatural amino acid residue ~~such as alanine, 3-pyridylalanine (Pya), 2-thienylalanine (Thi), homoserine (Hse), phenylalanine, or diaminobutyric acid (Dab),~~

(b)  $X_2$  is alanine, or an alternative natural or unnatural amino acid residue having ~~a smaller or slightly larger~~ an aromatic or aliphatic side chain, ~~such as glycine, aminobutyric acid (Abu), norvaline (Nvu), t-butylglycine (Btg), valine, isoleucine, phenylglycine (Phg) or phenylalanine,~~

(c)  $X_3$  is lysine, ~~or either a basic residue such as arginine, or an uncharged natural or unnatural amino acid residue, such as norleucine (Nle), aminobutyric acid (Abu) or leucine,~~

(d) arginine is replaced by ~~either a basic residue such as lysine, or an uncharged natural or unnatural amino acid residue, such as citrulline (Cit), homoserine, histidine, norleucine (Nle) or glutamine,~~

(e)  $X_4$  is arginine, ~~or a natural or unnatural amino acid residue, such as asparagine, proline, serine, aminoisobutyric acid (Aib) or sarcosine (Sar), or an amino acid residue capable of forming a cyclic linkage such as lysine or ornithine,~~

(f) leucine is replaced with a natural or unnatural amino acid residue having a ~~slightly larger~~ an aromatic or aliphatic side chain, ~~such as norleucine, norvaline, cyclohexylalanine (Cha), phenylalanine or 1-naphthylalanine (1Na),~~

(g)  $X_5$  is isoleucine, or an alternative natural or unnatural amino acid residue having a ~~slightly larger~~ an aromatic or aliphatic side chain, ~~such as norleucine, norvaline, cyclohexylalanine (Cha), phenylalanine or 1-naphthylalanine (1Na),~~

(h) phenylalanine is replaced with a natural or unnatural amino acid ~~such as leucine, cyclohexylalanine (Cha), homophenylalanine (Hof), tyrosine, para-fluorophenylalanine (pFPh), meta-fluorophenylalanine (mFPh), tryptophan, 1-naphthylalanine (1Na), 2-naphthylalanine (2Na), biphenylalanine (Bip) or (Tie),~~

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- (i) X<sub>5</sub> and the terminal phenylalanine residue are reversed, or
- (j) the peptide is in cyclic form by the formation of a linkage between the side chain of X<sub>4</sub> and the C-terminus residue.

23. (Original) A peptide according to claim 16, wherein X<sub>2</sub> is alanine.

24. (Previously Amended) A peptide according to claim 16, wherein X<sub>5</sub> is isoleucine.

25. (Currently Amended) A peptide ~~according to claim 20~~, selected from the group consisting of:

HSKRRLIF (SEQ ID No. 34)

HAKRRLIF (SEQ ID No. 35)

HSKRRLFG (SEQ ID No. 36)

HAKRRLFG (SEQ ID No. 37)

KACRRLFG (SEQ ID No. 38)

KACRRLIF (SEQ ID No. 39)

	X1	X2	X3	R	X4	L	X5	F	
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 28)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 40)
	H-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 41)
H-	Pya-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 42)
H-	Thi-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 43)
H-	Hse-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 44)
H-	Phe-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 45)
H-	Dab-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 46)
H-	His-	Gly-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 47)
H-	His-	Abu-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 48)
H-	His-	Nva-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 49)
H-	His-	Bug-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 50)
H-	His-	Val-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 51)
H-	His-	Ile-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 52)
H-	His-	Phg-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 53)
H-	His-	Phe-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 54)
H-	His-	Ala-	Ala-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 56)
H-	His-	Ala-	Nle-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 57)
H-	His-	Ala-	Abu-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 58)

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H-	His-	Ala-	Leu-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 59)
H-	His-	Ala-	Arg-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 60)
H-	His-	Ala-	Lys-	Ala-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 61)
H-	His-	Ala-	Lys-	Cit-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 62)
H-	His-	Ala-	Lys-	Hse-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 63)
H-	His-	Ala-	Lys-	His-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 64)
H-	His-	Ala-	Lys-	Nle-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 65)
H-	His-	Ala-	Lys-	Gln-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 66)
H-	His-	Ala-	Lys-	Lys-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 67)
H-	His-	Ala-	Lys-	Arg-	Ala-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 68)
H-	His-	Ala-	Lys-	Arg-	Asn-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 69)
H-	His-	Ala-	Lys-	Arg-	Pro-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 70)
H-	His-	Ala-	Lys-	Arg-	Ser-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 71)
H-	His-	Ala-	Lys-	Arg-	Aib-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 72)
H-	His-	Ala-	Lys-	Arg-	Sar-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 73)
H-	His-	Ala-	Lys-	Arg-	Cit-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 74)
H-	His-	Ala-	Lys-	Arg-	Arg-	Ala-	Ile-	Phe	-NH2 (SEQ ID No. 76)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phe	-NH2 (SEQ ID No. 77)
H-	His-	Ala-	Lys-	Arg-	Arg-	Ile-	Ile-	Phe	-NH2 (SEQ ID No. 78)
H-	His-	Ala-	Lys-	Arg-	Arg-	Val-	Ile-	Phe	-NH2 (SEQ ID No. 79 )
H-	His-	Ala-	Lys-	Arg-	Arg-	Nle-	Ile-	Phe	-NH2 (SEQ ID No. 80)
H-	His-	Ala-	Lys-	Arg-	Arg-	Nva-	Ile-	Phe	-NH2 (SEQ ID No. 81)
H-	His-	Ala-	Lys-	Arg-	Arg-	Cha-	Ile-	Phe	-NH2 (SEQ ID No. 82)
H-	His-	Ala-	Lys-	Arg-	Arg-	Phe-	Ile-	Phe	-NH2 (SEQ ID No. 83)
H-	His-	Ala-	Lys-	Arg-	Arg-	INap-	Ile-	Phe	-NH2 (SEQ ID No. 84)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ala-	Phe	-NH2 (SEQ ID No. 85)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Leu-	Phe	-NH2 (SEQ ID No. 86)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Val-	Phe	-NH2 (SEQ ID No. 87)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Nle-	Phe	-NH2 (SEQ ID No. 88)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Nva-	Phe	-NH2 (SEQ ID No. 89)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Cha-	Phe	-NH2 (SEQ ID No. 90)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Phe-	Phe	-NH2 (SEQ ID No. 91)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	INap-	Phe	-NH2 (SEQ ID No. 92)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Leu-	Phe	-NH2 (SEQ ID No. 93)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Leu	-NH2 (SEQ ID No. 95)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Cha	-NH2 (SEQ ID No. 96)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Hof	-NH2 (SEQ ID No. 97)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Tyr	-NH2 (SEQ ID No. 98)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	pFPhe	-NH2 (SEQ ID No. 99)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	mFPhe	-NH2 (SEQ ID No. 100)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Trp	-NH2 (SEQ ID No. 101)

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H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	1Nap	-NH2	(SEQ ID No. 102)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	2Nap	-NH2	(SEQ ID No. 103)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Lys	-NH2	(SEQ ID No. 104)
H-	His-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Tic	-NH2	(SEQ ID No. 105)
H-	His	Ala	Lys	Arg	Arg	Leu	Ile	L-Pse	OH	(SEQ ID No. 106)
H-	His	Ala	Lys	Arg	Arg	Leu	Ile	D-Pse	OH	(SEQ ID No. 107)
H-	His	Ser	Lys	Arg	Arg	Leu	Ile	L-Pse	OH	(SEQ ID No. 108)
H-	His	Ser	Lys	Arg	Arg	Leu	Ile	D-Pse	OH	(SEQ ID No. 109)
H-	His	Ala	Lys	Arg	Arg	Leu	Ile	L-Psa	OH	(SEQ ID No. 110)
H-	His	Ala	Lys	Arg	Arg	Leu	Ile	D-Psa	OH	(SEQ ID No. 111)
H-	His	Ser	Lys	Arg	Arg	Leu	Ile	L-Psa	OH	(SEQ ID No. 112)
H-	His	Ser	Lys	Arg	Arg	Leu	Ile	D-Psa	OH	(SEQ ID No. 113)
H-	His	Ala	Lys	Arg	Arg	Leu	Ile	Dhp	OH	(SEQ ID No. 114)
H-	His	Ser	Lys	Arg	Arg	Leu	Ile	Dhp	OH	(SEQ ID No. 115)
H-	His	Ala	Lys	Arg	Arg	Leu	Ile	Pheol		(SEQ ID No. 116)
H-	His	Ser	Lys	Arg	Arg	Leu	Ile	Pheol		(SEQ ID No. 117)
H-	Ala-	Ala-	Abu-	Arg-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 118)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 119)
H-	Ala-	Ala-	Lys-	Arg-	Cit-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 120)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ala-	pFPhe	-NH2	(SEQ ID No. 121)
H-	Ala-	Ala-	Abu-	Arg-	Ser-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 122)
H-	Ala-	Ala-	Lys-	Gln-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 123)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 124)
H-	Gly-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 125)
H-	Ala-	Ala-	Lys-	hArg-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 126)
H-	Ala-	Ala-	Lys-	Ser-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 127)
H-	Ala-	Ala-	Lys-	Hse-	Arg-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 128)
H-	Ala-	Ala-	Lys-	Arg-	Lys-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 129)
H-	Ala-	Ala-	Lys-	Arg-	Orn-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 130)
H-	Ala-	Ala-	Lys-	Arg-	Gln-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 131)
H-	Ala-	Ala-	Lys-	Arg-	Hse-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 132)
H-	Ala-	Ala-	Lys-	Arg-	Thr-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 133)
H-	Ala-	Ala-	Lys-	Arg-	Nva-	Leu-	Ile-	pFPhe	-NH2	(SEQ ID No. 134)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Phg-	Ile-	pFPhe	-NH2	(SEQ ID No. 135)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Met-	Ile-	pFPhe	-NH2	(SEQ ID No. 136)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Ala-	Ile-	pFPhe	-NH2	(SEQ ID No. 137)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Hof-	Ile-	pFPhe	-NH2	(SEQ ID No. 138)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	hLeu-	Ile-	pFPhe	-NH2	(SEQ ID No. 139)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	alle-	Ile-	pFPhe	-NH2	(SEQ ID No. 140)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Gly-	pFPhe	-NH2	(SEQ ID No. 141)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	βAla	pFPhe	-NH2	(SEQ ID No. 142)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Phg-	pFPhe	-NH2	(SEQ ID No. 143)

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H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Aib-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 144)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Sar-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 145)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Pro-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 146)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Bug-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 147)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ser-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 148)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Asp-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 149)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Asn-	pFPhe	-NH <sub>2</sub>	(SEQ ID No. 150)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	pFPhe-	Phe	-NH <sub>2</sub>	(SEQ ID No. 151)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	diClPhe	Phe	-NH <sub>2</sub>	(SEQ ID No. 152)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	pClPhe-	Phe	-NH <sub>2</sub>	(SEQ ID No. 153)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	mClPhe	Phe	-NH <sub>2</sub>	(SEQ ID No. 154)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	oClPhe-	Phe	-NH <sub>2</sub>	(SEQ ID No. 155)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	piPhe-	Phe	-NH <sub>2</sub>	(SEQ ID No. 156)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	TyrMe-	Phe	-NH <sub>2</sub>	(SEQ ID No. 157)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Thi-	Phe	-NH <sub>2</sub>	(SEQ ID No. 158)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Pya-	Phe	-NH <sub>2</sub>	(SEQ ID No. 159)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	diClPhe	-NH <sub>2</sub>	(SEQ ID No. 160)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	pClPhe	-NH <sub>2</sub>	(SEQ ID No. 161)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	mClPhe	-NH <sub>2</sub>	(SEQ ID No. 162)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	oClPhe	-NH <sub>2</sub>	(SEQ ID No. 163)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Phg	-NH <sub>2</sub>	(SEQ ID No. 164)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	TyrMe	-NH <sub>2</sub>	(SEQ ID No. 165)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Thi	-NH <sub>2</sub>	(SEQ ID No. 166)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Pya	-NH <sub>2</sub>	(SEQ ID No. 167)
H-	Ala-	Ala-	Lys-	Arg-	Arg-	Leu-	Ile-	Inc	-NH <sub>2</sub>	(SEQ ID No. 168)

and the cyclic peptides:

5,8-cyclo-[H-His-Ala-Lys-Arg-Lys-Leu-Phe-Gly] (SEQ ID No. 169)

5,8-cyclo-[H-His-Ala-Lys-Arg-Orn-Leu-Phe-Gly] (SEQ ID No. 170)

55. (New) A peptide according to claim 22, wherein X<sub>1</sub> is selected from the group consisting of histidine, alanine, 3-pyrroldylalanine (Pya), 2-thienylalanine (Thi), homoserine (Hse), phenylalanine and diaminobutyric acid (Dab).

56. (New) A peptide according to claim 22, wherein X<sub>2</sub> is selected from the group consisting of alanine, glycine, aminobutyric acid (Abu), norvaline (Nva), t-butyglycine (Bug), valine, phenylglycine (Phg) and phenylalanine.

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57. (New) A peptide according to claim 22, wherein  $X_3$  is selected from the group consisting of lysine, arginine, norleucine (Nle), aminobutyric acid (Abu) and leucine.

58. (New) A peptide according to claim 22, wherein arginine is replaced by lysine, citrulline (Cit), homoserine, histidine, norleucine (Nle) or glutamine.

59. (New) A peptide according to claim 22, wherein  $X_4$  is selected from the group consisting of arginine, asparagines, praline, serine, aminoisobutyric acid (Aib), sarcosine, lysine and ornithine.

60. (New) A peptide according to claim 22, wherein leucine is replaced by norleucine, norvaline, cyclohexylalanine (Cha), phenylalanine or 1-naphthylalanine (1Nal).

61. (New) A peptide according to claim 22, wherein  $X_5$  is selected from the group consisting of isoleucine, norleucine, norvaline, cyclohexylalanine (Cha), phenylalanine and 1-naphthylalanine (1Nal).

62. (New) A peptide according to claim 22, wherein phenylalanine is replaced by leucine, cyclohexylalanine (Cha), homophenylalanine (Hof), tyrosine, para-fluorophenylalanine (pFPhe), meta-fluorophenylalanine (mFPhe), tryptophan, i-naphthylalanine (1Nal), 2-naphthylalanine (2Nal), biphenylalanine (Bip) or (Tic).



**FAX TRANSMISSION****DATE:** June 24, 2003**PTO IDENTIFIER:** Application Number 09/726470  
Patent Number**Inventor:** Daniella I Zheleva, et al.**MESSAGE TO:** B. Dell Chism Art Unit 1654 Phone: 703-306-5815 Fax: 703-746-9035**FROM:** LAHIVE & COCKFIELD, LLP

Cynthia L. Kanik, Ph.D.

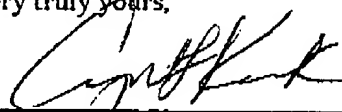
**PHONE:** (617) 227-7400**Attorney Dkt. #:** CCI-014**PAGES (Including Cover Sheet):** 9**CONTENTS:**

Dear Examiner Chism

Enclosed is a draft of the proposed claim amendments which I would like to discuss with you tomorrow

I look forward to meeting with you at 11:00 a.m.

Very truly yours,



If your receipt of this transmission is in error, please notify this firm immediately by collect call to (617) 227-7400 and send the original transmission to us by return mail at the address below.

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